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## HD Essentials: Get in the Middle of the HD Action



THE DOLBY HD AUDIO BUYING GUIDE

Dolby Digital provides up to 5.1 separate channels of crystal-clear digital surround sound that brings entertainment to life. A worldwide standard in film, broadcast, and DVDs, Dolby Digital delivers unrivalled audio in home theater systems for an exciting, enveloping surround sound experience—the perfect complement to HDTV.

After March 1, 2007, it became mandatory for all television reception devices (including TVs, VCRs, and DVRs) imported into the US or shipped interstate to contain a digital tuner.

If you get your TV signals over the air—that is, through an antenna rather than via cable, satellite, or the Internet—a TV without a digital tuner soon won't be able to pick up local broadcast signals. You'll need a converter box, available from most home electronics stores.

Cable and satellite companies will provide their customers with appropriate set-top boxes, if necessary.

Analog sets should continue to work with gaming consoles, VCRs, DVD players, and similar products that you use now. For households wishing to keep using their analog sets after next February, the US Congress is issuing coupons that can be applied toward the cost of eligible converter boxes. Visit www.dtv2009.gov/ for more information.

#### The Importance of Good Sound

How important is sound in the entertainment experience? Consider: You can listen—on an iPod, a radio, an elaborate stereo or surround system—without any visual cues whatsoever. You can be totally caught up in a song, a symphony, an interview.

But just try watching TV, even a program as visually compelling as figure skating, with no audio. Your first impulse will be to turn on the sound.

#### **Ready for Digital Television?**

On February 17, 2009, all broadcast TV transmissions in the US will convert to digital. What exactly does that mean? In a nutshell—good things: better picture, better sound, and more content.

Now is a great time to make your own switch—from just watching TV to enjoying everything this new home entertainment experience has to offer. Imagine: brilliant picture quality from a digital, high-definition television (HDTV), with sound to match.

With HDTV you see the rain. Add a top-notch surround sound system, and you'll be reaching for your umbrella.

#### **Get Into the Sound**

As part of the new broadcast standard, every new digital or high-definition television includes built-in Dolby<sup>®</sup> Digital audio technology, giving you access to the same high-end audio you hear at your local movie theatre. The ATSC standard that guides all broadcasters and TV manufacturers includes "theatre-quality" audio, Dolby Digital, for up to 5.1-channel surround sound.

The result is DVD-quality audio with broadcast programs, whether you're listening through the stereo speakers built into your digital or HDTV, or enhancing it with a home theater system.

It's your choice. You can enjoy stereo audio directly from your new TV. Or, you can take the sound to a much higher and more exciting level via a home theater system that features multiple channels for compelling surround sound.

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**2.1 sound system** Two speakers, an amplifier, and a subwoofer. The ".1" refers to the subwoofer that produces those deep bass sounds you feel as much as you hear. Not all 2.1 systems support surround sound, so look for a virtual technology such as Dolby Virtual Speaker.

**5.1/7.1** Five or seven speakers plus a subwoofer used in the surround sound format and the home theater.

**ATSC** Advanced Television Systems Committee, the government-directed committee that developed the ATSC digital television transmission system.

**Blu-ray Disc** The newest optical disc format to support high-definition movies and entertainment. It offers more than five times the storage of standard DVDs.

**Component system** Several units purchased separately that combine to provide a home theater entertainment system. Components include a set of speakers, an amplifier-tuner, and select video sources such as a DVD player or Blu-ray Disc player.

HDMI 1.3 A compact audio/video connector that transfers uncompressed audio and video data over a single cable connection.

**HDTV** High-definition television provides high-resolution, high-quality pictures plus Dolby Digital audio. It is typically in a widescreen or 16:9 format.

**Home-theater-in-a-box** A kit that includes components, such as the speakers and amplifier-tuner system, for an affordable, easy-to-set-up home theater.

**S/PDIF** Sony/Philips digital interface, a serial interface used to transfer digital audio from a CD or DVD player to TVs and sound systems.

**SDTV** The basic level of digital picture resolution that can be either in the traditional TV (4:3) or wide-screen format. It also includes Dolby Digital audio.

**Sound bar** A single speaker unit that is an alternative to a discrete 5.1 surround system. Not all sound bars support surround sound, so look for virtual technology such as Dolby Virtual Speaker.

Surround sound Multichannel audio that encircles the audience with the sound of the movie or program. In a 5.1 system, this typically means Left, Center, Right, Left Surround, and Right Surround, plus the ".1" for the subwoofer.

Wide-screen 16:9 The aspect ratio (width to height) for high-definition television images.

## Get Started

Putting together a great home theater system can be easy—all you need are a few key components, some of which you may already own.

### 1 Digital TV

For optimal viewing, you'll want a wide-screen HDTV set with a 16:9 (width to height) aspect ratio. These most closely duplicate cinema screens, so you'll see movies just as the filmmakers intended. HDTV broadcasts (think sports!) and most DVDs also play in the wide-screen format. For optimal viewing flexibility, including the ability to receive over-the-air broadcasts, make sure your TV has a built-in HD tuner. Plasma TVs offer a great picture with deep blacks, and at above the 50-inch screen size, are a great value. LCDs perform well in bright rooms due to their matte screens and are available in a number of smaller sizes. When space is not an issue, larger screen rear-projection DLP<sup>™</sup> TVs provide excellent image quality.

#### 2 Digital Programming Source

Dolby Digital is the audio standard for digital TVs and DVDs. You'll need at least one source component with a Dolby Digital output. This could be a DVD player, the set-top box from your digital cable or digital satellite service, or the TV itself for over-the-air television signals.

A Cool New Source for Movies If you have an HDTV, you may want to consider a Blu-ray Disc<sup>™</sup> player to round out your home theater. The high-definition Blu-ray<sup>™</sup> format lets you take full advantage of your HDTV's display capabilities and the latest Dolby high-resolution surround sound technologies such as Dolby TrueHD. Kevin Hunt, in the *Chicago Tribune*, writes: "But if I buy a Blu-ray player, or another audio-video receiver, it will be as much for [Dolby] TrueHD as for the 1080p video."

#### 3 Home Theater Sound

A receiver is the heart of a multichannel home theater system delivering 5.1 to 7.1 surround sound. All audio and video inputs go into the receiver, which then connects to the digital or high-definition TV and speakers. Look for a unit with plenty of inputs and outputs, as well as sufficient amplifier power for your speakers.

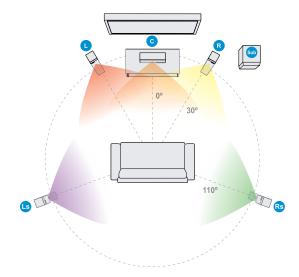
**Speakers and a Subwoofer** There are many speaker options to choose from running the gamut from a single "sound bar" speaker to eight speakers in a full surround sound system. Surround systems are available for a wide range of budgets and room sizes, from prematched "home-theater-in-a-box" (HTIB) systems to elaborate custom setups. Be sure that any system includes a subwoofer, for all the dramatic sound of earthquakes, explosions, and trains (just to name a few).

### 4 Cables

Most newer TV sets, A/V receivers, and disc players use HDMI<sup>™</sup> 1.3 connectors. HDMI, or high-definition multimedia interface, is a technology that allows a single-cable connection between components. A welcome end to the tangle of cords on the floor! This cable carries both audio and video signals and also allows the components to "talk" to each other. We recommend you look for a receiver with at least two HDMI 1.3 connectors—one for your DVD or Blu-ray player and one for your TV set.

Finally, you'll need speaker, audio, and video cables (using HDMI 1.3 cables for all your audio/video sources reduces the clutter). You may already have some cables you can use. Replace very old or inexpensive speaker cables as they can degrade the sound quality of your system.





A Typical 5.1 Speaker Setup

For more information on how to set up speakers, visit www.dolby.com/speakersetup.

## **Consider Your Options**

#### **HD Setup**

No rule says your surround speakers must be permanently placed in one spot. If the location interferes with daily traffic patterns in the room, leave enough speaker wire attached so you can store them out of the way when they are not in use. Then simply place them properly when you are ready to screen your favorite program.

#### **Is Bigger Better?**

When buying a new TV display, bigger isn't always better. Take your room size into account. Check the minimum and maximum viewing distances for a particular display and make sure it works with the size of your room.

#### **Avoid Cable Clutter**

Connect your home entertainment system easily and avoid a messy web of cables. Buy components and cables that support the latest technology with HDMI 1.3. HDMI 1.3 combines support for audio and video in a single cable—no need for separate cables.

#### **HD** Quality Sound Guaranteed

When buying an entertainment system, look for the Dolby logo. Dolby Digital technology is the audio standard for the ATSC digital TV. Look for Dolby's newest advances, Dolby Digital Plus and Dolby TrueHD, in Blu-ray Disc players and the newest A/V receivers.

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#### **Questions for Your Salesperson**

What is the TV resolution: 720 or 1080p?

720p is the basic level of resolution for broadcast HD; 1080p is a higher resolution.

Do the TV and A/V receiver have HDMI 1.3 connectors? How many?

Make sure you have a minimum of two HDMI 1.3 connections.

How many—and which—inputs and outputs does the receiver have?

Look for HDMI 1.3, S/PDIF, S-Video, and RCA component video connections.

Can this A/V receiver hook up to the TV and support Dolby technologies?

Ask to see the Dolby logo on the unit and on the packaging.

### HD Shopping Checklist

#### **Digital TV** (Details to consider)

Is it the right size for the room?

#### Does it have HDMI 1.3 connections?

#### DISPLAY TYPE (Choose one)

Plasma LCD DLP

SCREEN RESOLUTION (Choose one)

\_\_\_\_720p \_\_\_\_1080p

#### **Home Theater Sound**

#### A/V receiver with Dolby technology

#### \_\_\_\_\_

### SPEAKER CONFIGURATION (Choose one)

- Stereo
- 5.1
- 7.1
  - Sound bar

#### **Digital Programming Source**

- Over the air—antenna
- HD satellite service
- HD cable service
- HD broadband service
- Blu-ray Disc player

#### **Cables and More**

- HDMI 1.3
- Speaker wire
- Universal remote



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In the space provided, sketch the room where your HD entertainment system will be. Include solid walls, windows, and major pieces of furniture such as sofas and chairs.

Notes: